User's Manual

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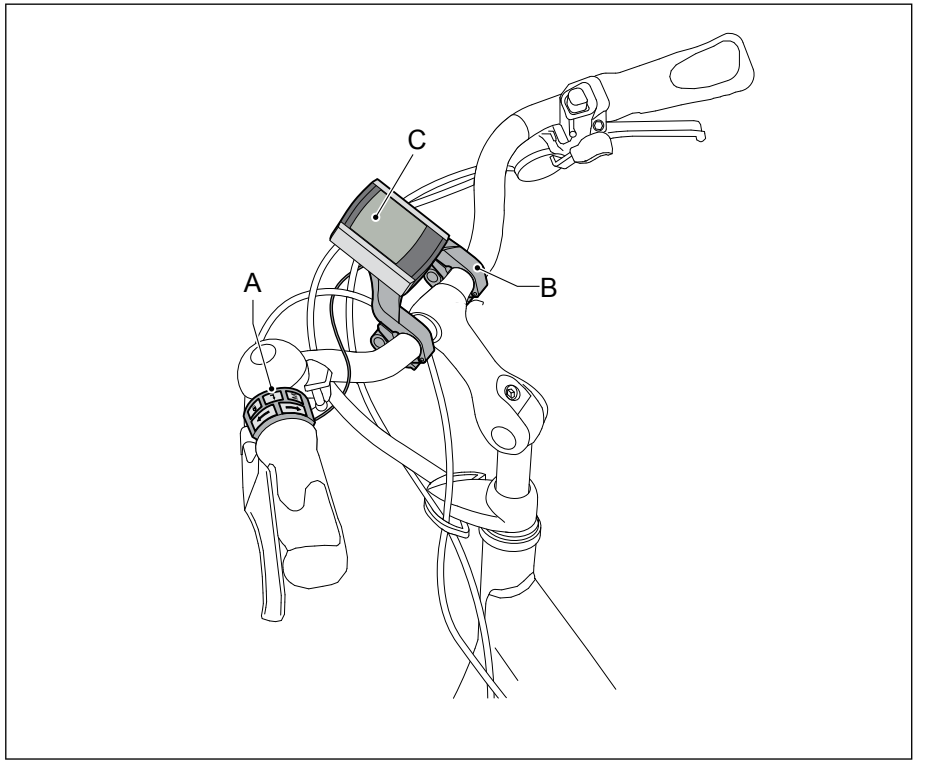
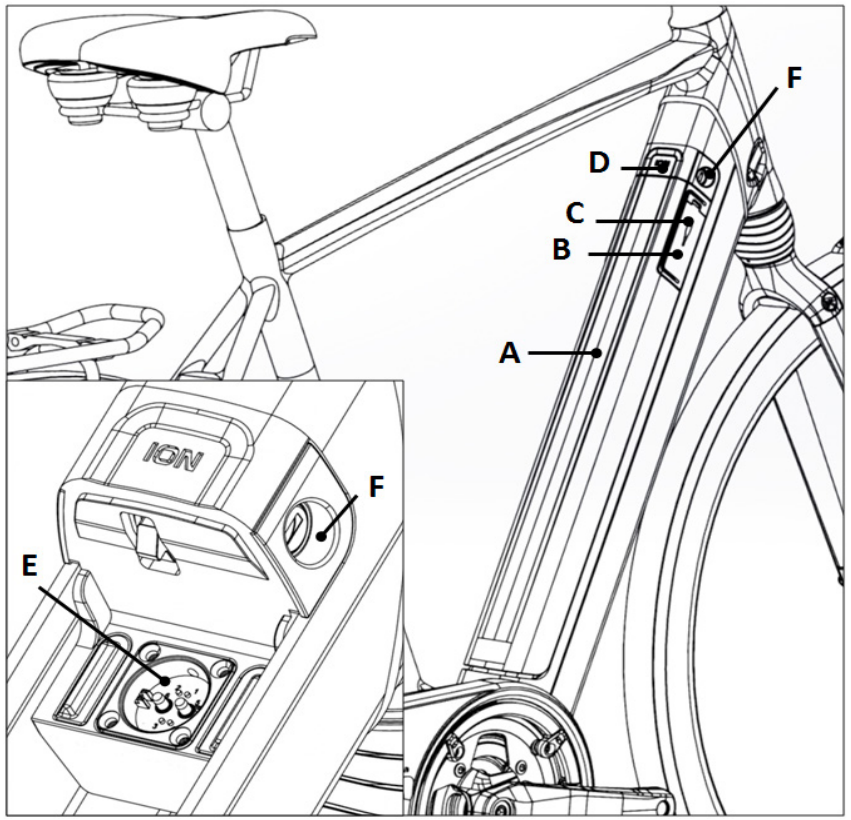
1 Overview of components

1.1 Display and control unit



A Control unit
B Display holder
C Display

1.2 Battery pack and charger



A Battery pack
B State of charge display
C Charging point
D Docking station
E Docking station contact point
F Lock

2 Battery pack

2.1 Charging instructions

Read the following instructions and warnings carefully before using the E-bike. The manufacturer is not responsible for accidents or malfunctions caused by improper use of the E-bike or parts of the E-bike:

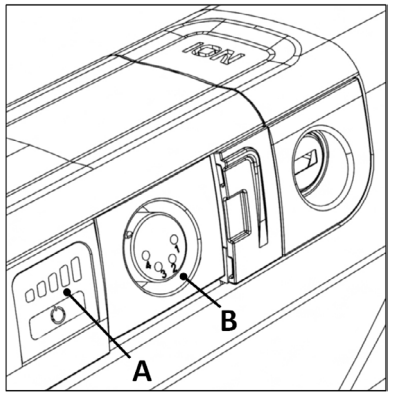
- Fully charge the battery pack once before the first use of the bike.
- Every battery runs down over time. This process is called ‘self-discharge’. A battery pack that is empty and that is not charged can reach deep discharge due to self-discharge within two months, causing it to become defective. The warranty is void in the event of deep discharge.
- The battery pack does not need to be completely empty before charging. The battery pack will remain in good condition if you charge the bicycle after every use (regardless of the trip distance). Once the battery is fully charged, charging stops automatically. The light on the charger continues to be lit green.
- You can leave the charger connected for long-term storage. If this is not possible, charge the battery pack fully and disconnect the charger from the battery pack. Charge the battery pack fully at least once every two months.
- Ensure that the battery pack remains within the temperature limits given below. This extends the lifespan and increases the performance of the battery pack. Furthermore, charging or the power assistance will not work outside the temperature limits.

Status	Minimum [°C]	Maximum [°C]
While charging	0	45
During use	-15	60
Storage (at least 80% charge level)	-10	35

- Always charge the battery pack using the charger delivered with the bicycle. Do not use any other charger. The colour of the plug must match the colour of the socket.
- No not connect the charger to the mains voltage when it is not used.
- The charging time dependents on the charger type.
- Disconnect the charger from the battery before you start cycling.
- Make sure that the charger does not get wet.
- Do not damage the charger.
- Do not charge the battery pack in direct sunlight.
- Do not drop the battery pack. This can damage the battery pack.

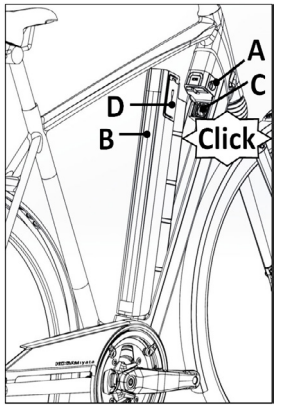
- Remember that your bike produces less power assistance at lower temperatures (below 10°C) and that the battery pack will run empty more quickly. Charging also takes longer at high or low temperatures.
- Large temperature changes can cause major differences in the battery charge indication, especially at low temperatures and with a low charge on the battery pack.

2.2 Charging the battery pack

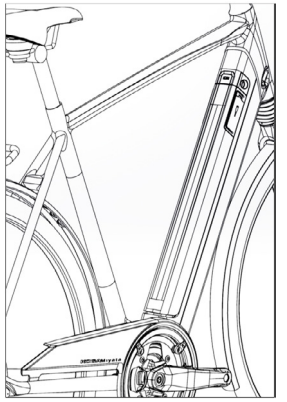


1. Check that the power cable is properly connected to the charger.
2. Open the rubber cover cap.
3. Connect the charger to the mains voltage.
4. Connect the plug of the charger to the contact point (B).
5. The green indicator (A) will light up.
6. Remove the charger before you start cycling.
7. Close the rubber cover cap.

2.3 Installing the battery pack



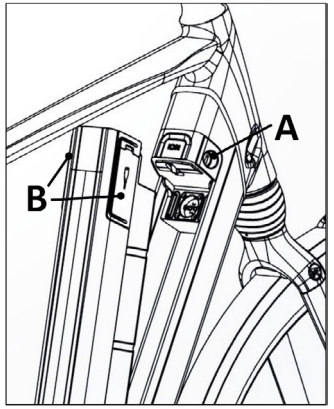
1. Remove the key from the lock of the docking station (A).
2. Drop the battery pack (B) carefully into the slot and press it slightly so that it locks (C).
3. Make sure that the cover (D) of the charging plug is closed.



4. Make sure the battery pack is locked by pulling it backwards.

2.4 Removing the battery pack

1. Insert the key in the lock (A) (this key is the same as the key for the bicycle lock).



2. Grip the battery pack by the rubber grips (B) and carefully pull it upwards.

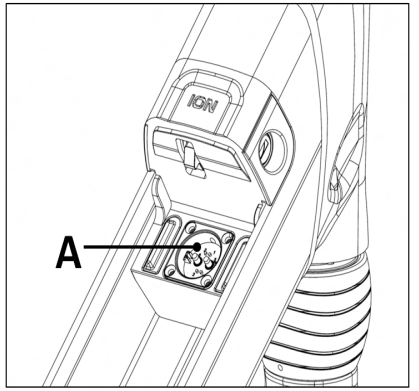
- Then remove the battery pack. Always use two hands to prevent the battery pack from falling.
- Remove the battery pack from the frame when transporting the bicycle by car. For protection, place the plastic cover cap in the bicycle in the same position as the battery pack.

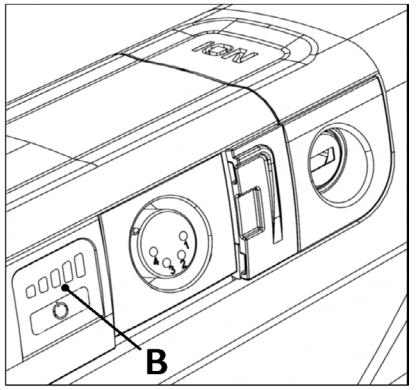
2.5 Security

The battery pack can only be used on the bicycle on which it has been installed. A code in the software makes sure that it cannot be used on another bicycle, that is to say, there will be no peddling assistance (protection against theft). A second battery pack can in many cases be purchased for your E-bike. Contact your dealer for more information.

2.6 Diagnosis message

If all LEDs flash on the battery pack, first check whether the battery pack has been correctly connected to the docking station (A). The LEDs (B) are located on the battery pack next to the charging point.
If the LEDs continue to flash, contact your dealer.





2.7 Lights

The lights (both at the front and rear) are supplied with electricity by the battery pack and will, therefore, only work when the battery pack has been installed in the E-bike. The motor will work as a dynamo when the battery pack is flat.

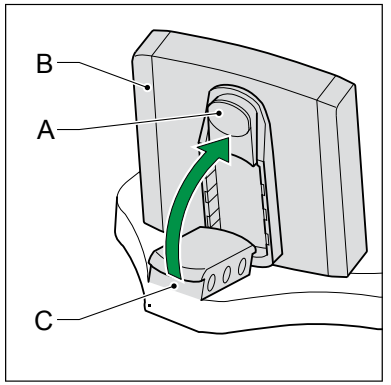
If the rear light needs to be replaced, we recommend contacting your certified E-bike dealer.
For more information, also refer to paragraph 3.7.3.

3 Display

3.1 Removing and fastening

Removing: Press the button (A) on the bottom side and remove the display (B) from the display holder (C).

Fixing in place: Position the display (B) obliquely on the display holder (C) and click it in place in the lock.

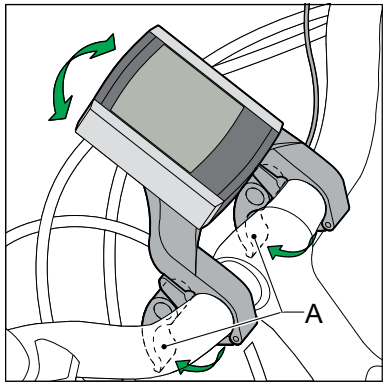


3.2 Adjustment

Loosen the screws (A) and twist the display holder.

Remove the display when storing and transporting the bicycle.

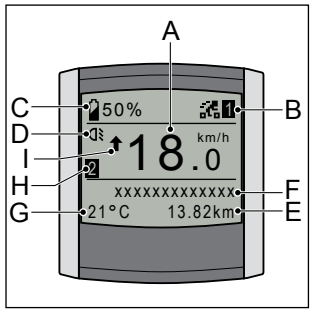
To ensure that the E-bike works correctly, make sure the interface between the display and the display holder is free of dirt and moisture. If necessary, clean it with a clean, dry cloth.



3.3 Overview of buttons and indications

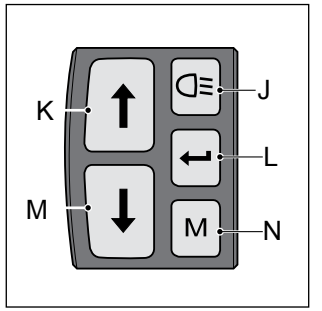
3.3.1 Display

A Present speed
B Peddling assistance level
C Battery pack charge level
D Lighting indicator
E Variable indicator
F Variable indictor description
G Temperature/Time
H View Trip 1/Trip 2
I Average speed indicator



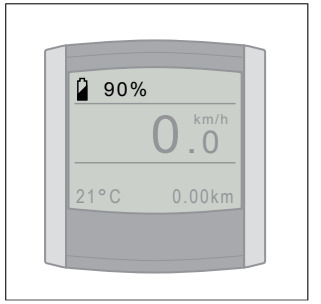
3.3.2 Control unit

J Lighting button
K Up button – variable application
L Set – variable application
M Down button – variable application
N Mode button – variable application



3.4 Switching on display

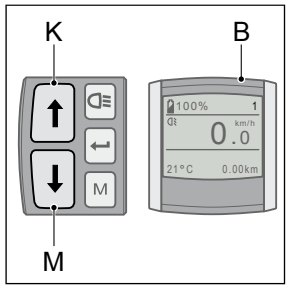
If the up arrow on the lighting button is pressed, the reading will be displayed.
When the E-bike is not in use, the power assistance and lighting will switch off automatically after five minutes. Fifteen minutes later, the display will automatically switch to sleep mode and no longer show an image. To get the display out of sleep mode, press on or or put the E-bike into motion.



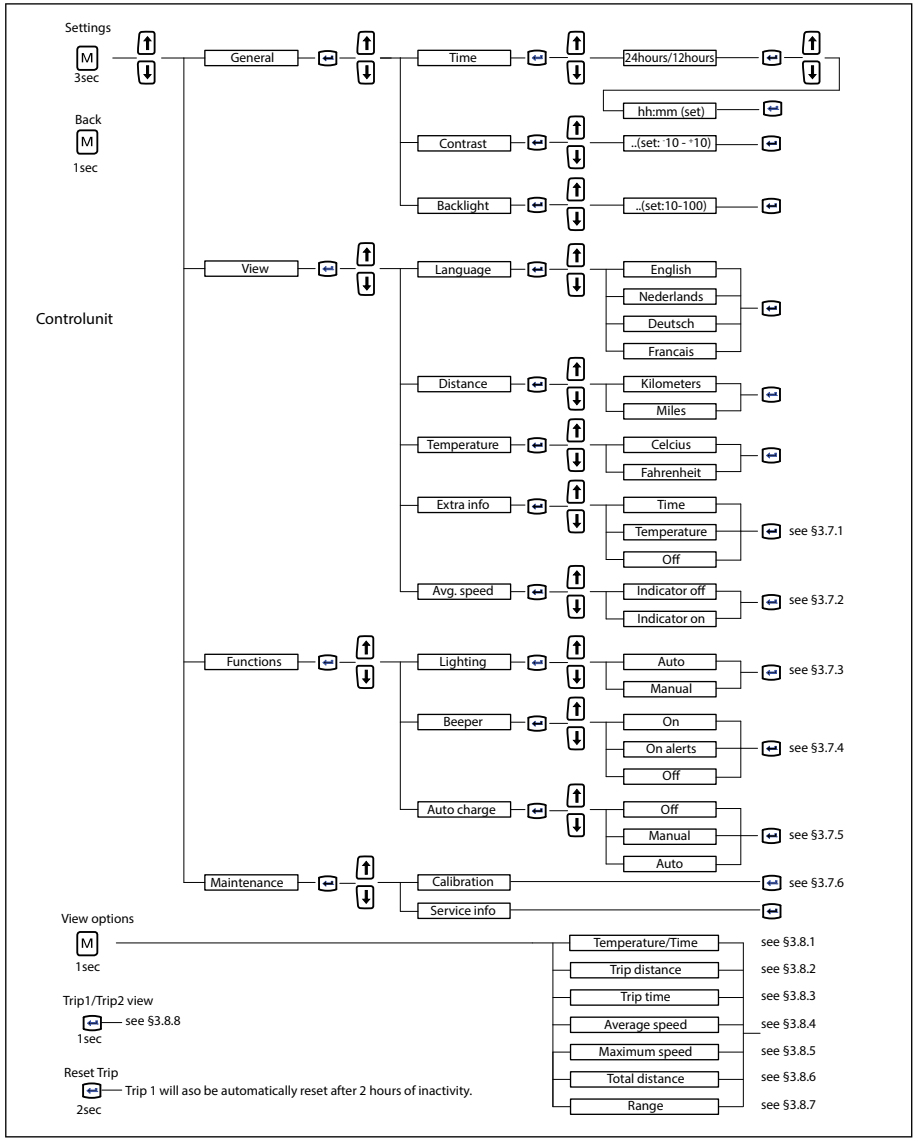
3.5 Setting power assistance

Press the up (K) or down (M) button to set the support (B).

Ride programme:
1. ECO
2. CRUISE
3. TOUR
4. SPORT
5. POWER



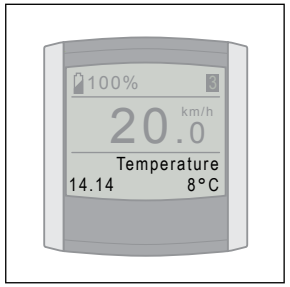
3.6 Menu overview



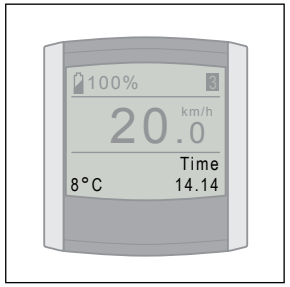
3.7 Notes on menu overview

3.7.1 Extra information

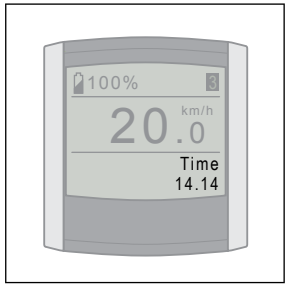
With this option you can indicate whether you want to see extra information in the display. The chosen option is shown as a standard at the bottom left of the display. If you select Time, the time will be displayed on the left at the bottom of the display as standard. Temperature is then shown under display options.



If you select Temperature, the temperature will be displayed on the left at the bottom of the display as standard. Time is then shown under display options.

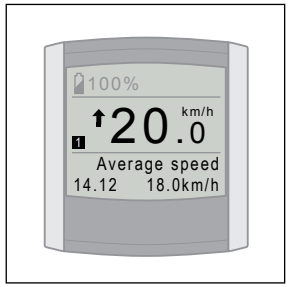


When you select Off, the room at the bottom left of the display remains empty. Both Time and Temperature will then be shown under display options.



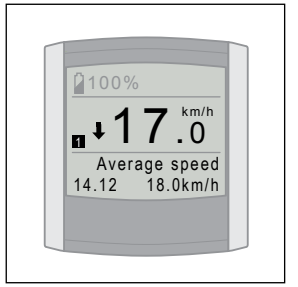
3.7.2 Indicator Average speed

The indicator for average speed indicates, when cycling, whether the current speed is above or below the average speed of the ride.

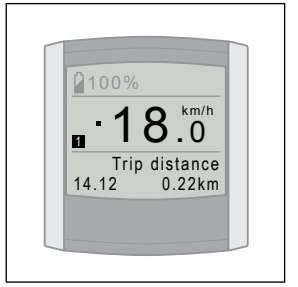


Arrow upwards means:
current speed is above the average speed of the ride.

Arrow downwards means:
current speed is below the average speed of the ride.



Block means:
current speed is almost the same as the average speed of the ride.



With the option Average Speed you indicate whether you want to show the indicator in the display or not.

3.7.3 Lighting

You can set whether you wish the lights to be switched on automatically or whether you wish to do this manually under Lighting.
If you select Auto, the bicycle lighting will be switched on and off automatically. A light sensor will continuously measure the quantity of light and will switch the lights on and off based on this.
If you select Manual, the bicycle lighting will only be switched on or off when you use the lights button on the control unit.
For more information, also refer to paragraph 2.7.

3.7.4 Beep Signals

You can set whether and when you wish to hear beep signals under Beepers.

If you select On, the display will emit five long beeps when there is a message on the display. In addition, you will also hear a short beep signal when you press the control unit buttons, after calibrating and after resetting a ride.

If you select On alerts, the display will emit five long beep signals when there is a message. Your display will not emit beep signals with this setting when the control unit buttons are pressed, after calibrating and after resetting a ride.

If you select Off, the display will not issue beep signals when operating the control unit nor when there are alerts, after calibrating and after resetting a ride.

3.7.5 Automatic Charging (optional)

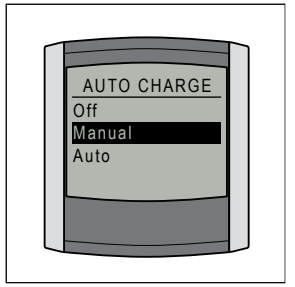
With this function, the E-bike automatically generates energy when no pressure is being exerted on the pedals. This allows the battery pack to recharge while you are cycling.

Ask your dealer about the terms and conditions.

To use the function, you first have to switch it on via the display menu. You can then use the set button ↵ to activate or deactivate automatic charging. Automatic charging works up to about 80% capacity, depending on the temperature.

Turning on automatic charging

You can turn on automatic charging by selecting (in this order) *Functions, Auto Charge and Manual or Automatic* in the display menu. The selected menu setting will apply until you change it again in the display menu.

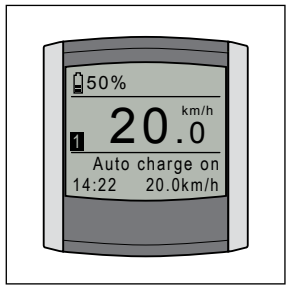


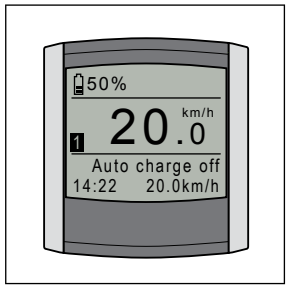
NB: When you turn on automatic charging, the set button ↵ loses its toggle function between Trip 1 and Trip 2 (see 3.8.8).

Activating automatic charging

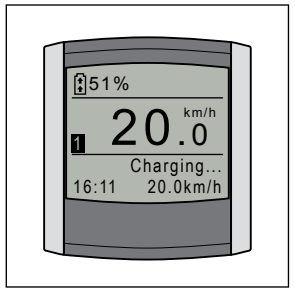
Manual
If you select the *Manual* option via the display menu, automatic charging will be inactive when you turn on the E-bike. You can activate the automatic charging, when pedal assistance is engaged, by pressing briefly on the set button ↵. The message "Auto Charge on" will appear temporarily.
The function will then remain active until the E-bike is switched off (and the brand logo disappears). If you want to deactivate automatic charging during the journey, press the set button ↵ briefly again. The message "Auto Charge off" will then appear temporarily.

Automatic
If you select the Automatic option via the display menu, *automatic* charging will be active as soon as you engage the pedal assistance. If you want to deactivate automatic charging during the journey, press the set button ↵ briefly. The message "Auto Charge off" will then appear temporarily.





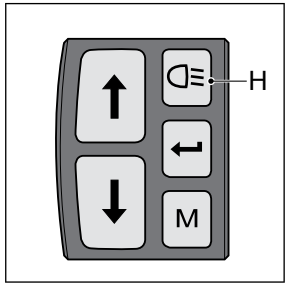
When automatic charging is activated and no pressure is being exerted on the pedals, the battery pack will be recharged automatically. When charging takes place, you will feel a slight resistance against the motor. The message "Charging…" and a plus-sign or two arrows will appear in the battery icon (depending on the type of display).



3.7.6 Calibration

If the peddling assistance is reduced in due course, the electronics may have to be calibrated.

1. Stand next to the bicycle.
2. Do not exert force on the pedals.
3. Switch off the lights (H).
4. Keep the lights button pressed for at least two seconds until the message is issued that the calibration has been completed.



For continued comfortable pedal assistance,we advise you to calibrate the E-bike once per month.

3.8 Explanation of display options

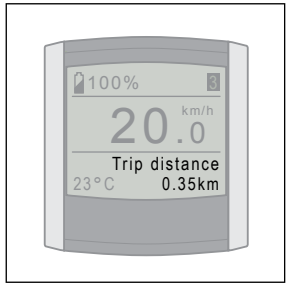
By briefly pressing the MODE button, you decide what you want to show at the bottom right of the display. All possible display options are briefly explained below.

3.8.1 Time/Temperature

With menu settings you can select whether want to see Time, Temperature or nothing as a standard at the bottom left of the display (see § 3.7.1). The non-selected option(s) will then be placed automatically under display options.

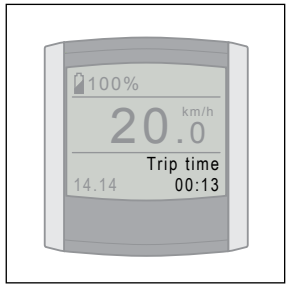
3.8.2 Trip distance

The trip distance measured from the moment that you start cycling.
For resetting the “Trip distance” see § 3.8.8.



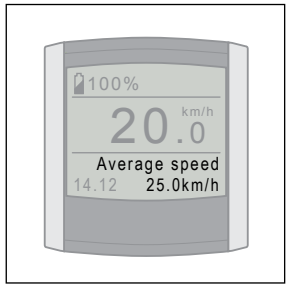
3.8.3 Trip time

The trip time measured from the moment that you start cycling.
For resetting the “Trip time” see§ 3.8.8.



3.8.4 Average speed

Average speed measured over the cycled distance.
For resetting the “Average speed” in § 3.8.8.

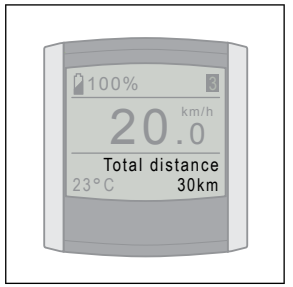


3.8.5 Maximum speed

Maximum speed measured over the cycled distance.
For resetting the “Maximum speed” see in § 3.8.8.

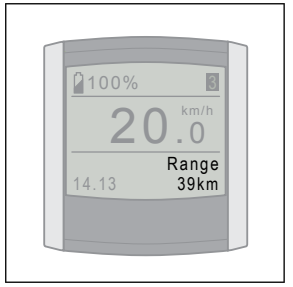
3.8.6 Total distance

Total distance measured from the moment that you start cycling.
It is not possible to reset the total distance.



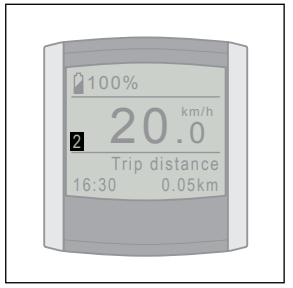
3.8.7 Range

The range shows how many kilometres you can still cycle using peddling assistance.
The range is calculated on the basis of actual and historic consumption in combination with the charging level of the battery pack.



3.8.8 Trip 1 and Trip 2

The Trip distance, Trip time, Average speed and Maximum speed are linked to each other and are kept track of twice, that is, in Trip 1 and Trip 2. You can select between the view of Trip 1 and Trip 2 on the display by pressing the set button briefly.

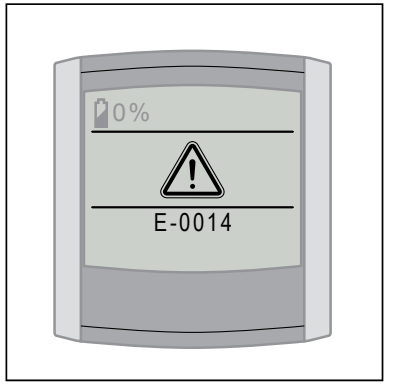


Resetting Trip 1 will be automatic when the bicycle is not used for more than 2 hours. Trip 1 can also be reset manually by keeping the set button pressed for a long time. You can only reset Trip 2 manually by keeping the set button pressed for a long time.

3.9 Use of other displays

Your display acts as an immobiliser, which makes it impossible to install any display on your E-bike and make full use of it.

Your display has a unique code that corresponds with the respective E-bike. If you want to switch on the support or the lights, it is checked whether the display and the bicycle belong together. If not, the message E0014 appears and the support and the lights cannot be switched on.
If you have two E-bikes with the same type of display, it is possible to register both displays for both bicycles.
Your certified E-bike dealer can do this for you. Then you can use both displays on both bicycles.



4 Range indication table

XHPL rear wheel motor (40 Nm)										
	Eco (km)		Cruise (km)		Tour (km)		Sport (km)		Power (km)	
Battery pack	min	max	min	max	min	max	min	max	min	max
317 Wh	70	135	50	100	35	70	30	55	25	50
418 Wh	90	175	70	130	45	90	40	75	35	70
490 Wh	110	205	80	155	55	105	45	90	40	80

XHP rear wheel motor (50 Nm)										
	Eco (km)		Cruise (km)		Tour (km)		Sport (km)		Power (km)	
Battery pack	min	max	min	max	min	max	min	max	min	max
317 Wh	70	135	50	100	35	70	30	55	25	50
418 Wh	90	175	70	130	50	95	40	75	35	70
490 Wh	110	205	80	155	60	110	45	90	45	80

The range depends on various factors and is strongly influenced by the following:

* Capacity (Ah) and voltage (V) of the battery pack;
* Pedal assistance level;
* Pedal assistance mode or riding program, ask your dealer about the possibilities;
* Ambient temperature;
* Wind force;
* Tyre pressure (at least 4 bar);
* Cycling speed;
* Weight of the cyclist and the load;
* Cycling behaviour;
* Road conditions;
* Use of gears.

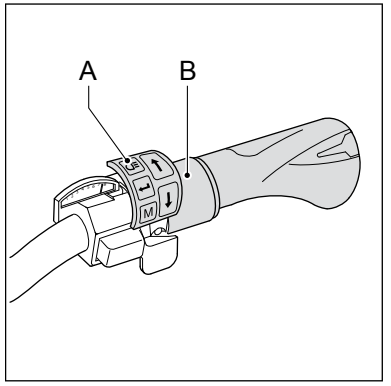
The range will perceptibly decrease as the battery pack gets older.

Shift gears

If the bicycle has been equipped with gears, timely shift the gears in order to increase the range.

5 Accelerator (optional)

5.1 Accelerator



The throttle (B) can be used when the peddling assistance has been switched on. You ‘throttle up’ by turning the throttle towards you.
When using the throttle for the first time, carefully try it out to familiarise yourself with the power the throttle delivers.

A Control unit
B Throttle

5.2 Boost function (use while cycling)

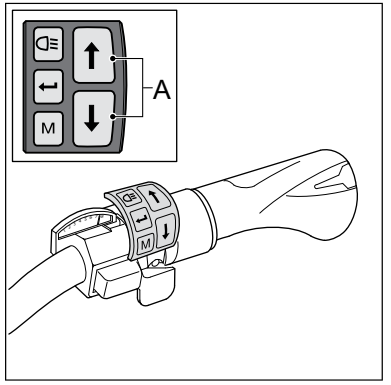
You can use the boost function while cycling. The throttle will provide an additional push during cycling. Handy when you wish to accelerate temporarily, for example, to overtake. The boost function is connected to the peddling assistance levels. The effect of the throttle can be felt the most in the ECO mode while it is felt the least in the POWER mode.

Note: the boost function will only work when you pedal too.

5.3 Parking assistance

The throttle offers support up to approximately 3 km/hour when you are walking alongside your bicycle. Handy when the E-bike needs to be fetched from the shed or basement.

Use the arrow keys on the control unit (A) to set the parking assistance.



Once you have set the parking assistance, you can use the throttle by turning it towards you.
Note: When using the throttle for the first time, carefully try it out to familiarise yourself with the power the throttle delivers.

6 Technical data

6.1 Weight and performance

	300Wh series	400Wh series	500Wh series
Capacity (Ah)	8.8	11.6	14.5
Weight of battery pack (kg)	2,7	2,7	2,7
Maximum power (W)	250	250	250
Charging time 80% (hrs)	3.5	5	6
Charging time 100% (hrs)	4.5	6	7.5
Voltage (V)	36V	36V	36V
Energy (Wh)	317	418	522

6.2 Temperature limits for battery cells

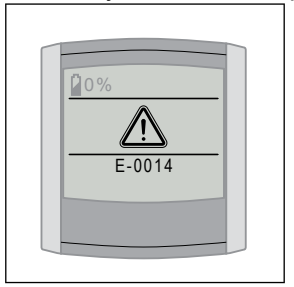
Status	Minimum [°C]	Maximum [°C]
While charging	0	45
During use	-15	60

6.3 Charger data

Input voltage	100-240 Vac (50-60Hz)
Input power	Max. 150 W
Input current	Max. 1,5 A

7 Diagnosis messages

Contact your dealer shop if the message is not listed in the manual.



Do not remove the rear wheel. This may affect the performance of the bicycle.

Message	Diagnosis	Solution
E01	Battery pack flat	Charge the battery pack.
E05	Bad motor connection	Switch on the pedal assistance and check if the battery pack is placed correctly.
E06	Short circuit in lighting	Please contact your dealer.
E07	Motor outside temperature range	Wait until the motor has reached the proper temperature.
E14	Display is not recognised	The display needs resetting. Take your bicycle to the dealer.
E16	Constant activity of the power sensor	Calibrate by holding the light button pressed for 5 seconds.

Message	Diagnosis	Solution
E19	Battery pack outside the temperature range	Wait until the battery pack is within the temperature range. The charging will then automatically continue.
E20	Service needed	Please contact your dealer.
E21	Motor current regulator	The assistance is adjusted by heavy use.
E22	Problems while charging	Turn the lights on/ off and wait for 10 seconds. Reconnect the battery charger. Go to the dealer if the message reappears.
E23	Serial number motor incorrect	This battery pack has not been installed on the bicycle. If this is not the case, please contact your dealer.
E30	No communication with torque sensor	Turn on the pedal assistance and check if the battery pack is placed correctly.
E32	Battery electronics are too warm.	Let the battery pack cool down and switch on the pedal assistance again.
E34	Control unit does not support accessories	Please contact your dealer.

Message	Diagnosis	Solution
E35	No communication with throttle	Check whether the plug of the throttle is placed well in the control unit and place the display again.
E39	Wrong charger connected	Connect the correct charger.
E45	Max temperature of motor controller reached	Allow the motor controller to cool before switching on support again.

8 Warranty conditions and legal requirements

Guarantee conditions
The following guarantee conditions supplement the applicable legal rights.

When does the guarantee apply?
The supplier of the battery pack will give a guarantee for any material or construction faults concerning the battery pack if the following condition is met:
* You only have a right to the guarantee if you can provide a certificate of guarantee or a receipt. The guarantee period commences on the day of purchase.
* The guarantee will be null and void when deep discharge is established.

Guarantee period of the E-bike
A 2-year factory guarantee is given with regard to the electrical parts of your E-bike (display, drive system and battery pack). For the guarantee period for the other parts refer to the guarantee provisions as specified in the instruction booklet of the manufacturer.

Do not clean the bicycle with a high-pressure spraying pistol. A too powerful jet of water may damage the electrical parts of your E-bike. This will make the guarantee null and void.

Additional guarantee

You can purchase an additional guarantee period to extend your guarantee for three more years within the first 2 years of purchasing your new E-bike. Contact your dealer for the conditions.

Legal requirements
The described conveyance is a bicycle according to European legislation, because the bicycle complies with the following rules:
* The support is only active when the user peddles too.
* The support is active for up to 25 km/hour.
* The supplied power is maximum 250 W.

Compliance
The manufacturer of your E-bike hereby declares that the product complies with all requirements and other relevant conditions of Machinery Directive 2004/108/EC, EMC Directive 2006/42/EC, the EN standards for EPACs (Electrically Power Assisted Cycle) EN15194:2009+A1:2011 and city trekking EN14764:2005.
The declaration of compliance is supplied with the E-bike.

Environment

We recommend that you return a faulty bicycle battery pack to your dealer in accordance with the environmental regulations for collecting and processing batteries drawn up by the Ministry of Housing, Spatial Planning and the Environment. The dealer is required to accept the battery and must ensure that it is processed further by the manufacturer.

Periodical maintenance

Your E-bike needs regular service. Your dealer can advise and inform you on how to make optimum use of your bicycle.
You can also contact your dealer for software updates or for an analysis of the diagnosis form containing the exact details of how you use your bicycle.